

REMARKS

This Response is submitted in reply to the Office Action mailed on October 12, 2006. Claims 1 to 23 are pending. Claims 1, 9 and 18 have been amended. Claim 24 has been added. No new matter was added by these amendments. Please charge Deposit Account No. 02-1818 for a One Month Extension of Time and any other fees which are due and owing.

In the Office Action, Claims 1 to 8, 16 and 17 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Application Publication No. 2003/0143352 A1 to Yang et al. ("Yang"). Claims 18 to 20 and 22 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,345,070 to Hlavinka et al. ("Hlavinka"). Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yang* in view of U.S. Patent No. 5,674,333 to Spencer ("Spencer"). Claims 10 to 15 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yang* and *Spencer* in view of U.S. Patent No. 4,832,773 to Shaposka et al. ("Shaposka"). Claim 21 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hlavinka* in view of U.S. Patent Application Publication No. 2003/0226631 to Sterud et al. ("Sterud").

Regarding the rejection of Claim 1 over *Yang*, amended independent Claim 1 is directed to a method of connecting together two sections of tubing including, among other steps, placing two tubing sections in opposed, end-to-end relation so that axially facing surfaces of the tube sections at the ends are free from exposure to the surrounding environment and maintaining such relation until and during welding.

Yang generally discloses a device which welds together flexible medical tubing using a laser. In *Yang*, before two pieces of tubing are ultimately connected, the interior passages of the tubes are exposed to their surrounding environment. Specifically, *Yang* explains:

[0070] As the temperature of the tubing material at the tube ends 51 increases, the tube ends 51 begin to melt, flow and reopen. The tubing material has a certain level of "memory"--as the sealed end of the tube reopens, the tube is predisposed to returning to its symmetrical, circular form. (emphasis added).

[0071] FIGS. 4D through 4F show the next step of the connecting process . . . After the laser 200 shuts off, the plate 106 moves to the back 16 of the housing 12. As the plate 106 moves, the collimator 204 moves to the side 18 along track 107. At the same time, the prism 206 moves toward the laser unit 200, and the tube holders 70, 72 come together via track 105. At this point, the now melted

and aseptically heated or sterilized tube ends 51 contact each other. (emphasis added)

In *Yang*, there is a period of time when the tubes “reopen” prior to when the tubes contact each other. The Office Action at paragraph 13 recognizes this and states that “applicant only claims the tubing is free from exposure when placed end-to-end” and that “[t]here is no claim language that suggests the tubing sections must remain sterile during the entire welding process.”

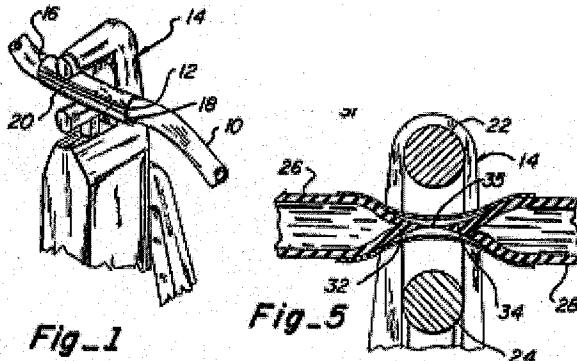
Applicants have now clarified independent Claim 1. As supported by at least paragraph 33 of the subject application, as filed, the method of amended independent Claim 1 includes placing two tubing sections in opposed, end-to-end relation so that axially facing surfaces of the tube sections at the ends are free from exposure to the surrounding environment and maintaining interior passages of the two tubing sections so as to be free from exposure to the surrounding environment until and during welding.

Whereas, the interior passages of the tubing in *Yang* are unambiguously “reopened” until a “next step,” wherein the tube ends contact each other. Although *Yang* makes reference to “sterilized tube ends,” such reference is independent of the inevitable exposure of the interior of the tubes to outside elements when “reopened.”

Accordingly, Applicants respectfully submit that independent Claim 1 is patentably distinguished over *Yang* and in condition for formal allowance. Claims 2 to 8, 16 and 17 depend directly or indirectly from independent Claim 1. Thus, for the same reasons, Applicants respectfully submit that dependent Claims 2 to 8, 16 and 17 are patentably distinguished over *Yang* and in condition for formal allowance.

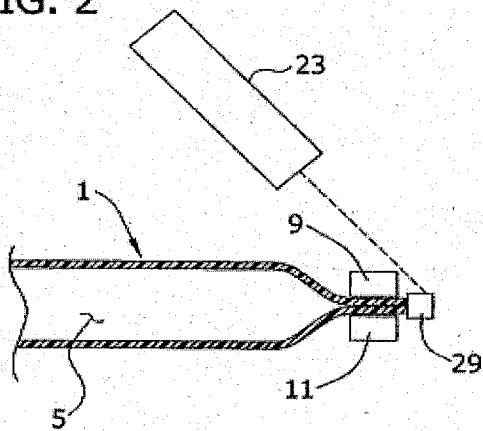
Regarding the rejection of Claims 18 to 20 and 22 over *Hlavinka*, amended independent Claim 18 is directed to a method of sealing a section of tubing including: clamping at least a portion of the tubing section such that a collapsed portion of the tubing section extends past the clamped portion; placing the collapsed portion of the tubing section in contact with an energy absorption member; directing a beam of electromagnetic energy onto the energy absorption member, the energy absorption member being constructed for absorbing energy from the beam; and transferring heat from the energy absorption member to the collapsed tubing section portion by contact therewith to melt and seal the collapsed tubing section portion in its collapsed configuration.

Hlavinka generally discloses a radio frequency tubing sealer 14 in which a portion of tubing 10 is placed in between two jaws 22 and 24 (see Figs. 1 and 5 below). A seal is created in the tubing 10 located directly between the jaws 22 and 24 by application of energy to a sleeve 12 surrounding the portion of tubing 10 placed directly between the jaws 22 and 24 when the jaws are squeezed together.



On the other hand, with reference to Fig. 2 of the specification below, the method of amended independent Claim 18 includes, among other steps, clamping at least a portion of a tubing section 1 such that a collapsed portion of the tubing section extends past the clamped portion; placing the collapsed portion of the tubing section in contact with an energy absorption member 29; directing a beam of electromagnetic energy onto the energy absorption member 29; and ultimately sealing the collapsed portion in its collapsed configuration. In this example, the clamped portion of the tubing section is defined by clamps 9 and 11.

FIG. 2



In *Havlinka*, as illustrated in Fig. 5, a middle portion of the tubing 10 located directly between the jaws 22 and 24 is sealed. In the method of Claim 18, as illustrated by Fig. 2, the collapsed portion extending past the clamped portion is sealed.

It should be appreciated that reference to Fig. 2 of the specification is only for purposes of example and clarification of independent Claim 18. Applicants do not intend to limit the method of Claim 18 to execution with the apparatus shown in Fig. 2. Fig. 2 is only illustrative.

Accordingly, Applicants respectfully submit that independent Claim 18 is patentably distinguished over *Hlavinka* and in condition for formal allowance. Claims 19, 20 and 22 depend directly or indirectly from independent Claim 18. Thus, for the same reasons, Applicants respectfully submit that Claims 19, 20 and 22 are patentably distinguished over *Havlinka* and in condition for formal allowance.

Applicants respectfully submit that the patentability of Claims 1 and 18 renders moot the obviousness rejections of Claim 9 in view of *Spencer*, Claims 10 to 15 and 23 in view of *Spencer* and *Shapaska* and Claim 21 in view of *Sterud*, depending respectively from Claims 1 and 18.

For the foregoing reasons, Applicants respectfully submit that the present application is in condition for allowance and earnestly solicit reconsideration of same.

Respectfully submitted,

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